In the claims:

1. (Original) An isolated nucleic acid molecule comprising a nucleic acid sequence shown in Table 2A, the expression of said nucleic acid being elevated during ruminant pregnancy when compared to levels in non-pregnant ruminant animals.

2. (Original) The nucleic acid molecule of claim 1, which is DNA.

3. (Original) The DNA molecule of claim 2, which is a cDNA.

4. (Original) An isolated RNA molecule transcribed from the nucleic acid of claim 1.

5. (Original) The isolated nucleic acid molecule of claim 1, wherein said sequence is selected from the group consisting of SEQ ID NO:5, 6, 19-23, 26, and 28-31.

6. (Currently amended) An oligonucleotide between about 10 and about 200 nucleotides in length, which specifically hybridizes with a nucleic acid molecule as claimed in claim 1 ~~which hybridizes with a sequence shown in Table 2A~~.

7. (Currently amended) An isolated ruminant protein or peptide fragment encoded by a nucleic acid molecule as claimed in claim 1 ~~shown in Table 2A~~, expression of said encoded protein being elevated during ruminant pregnancy.

8. (Currently amended) An antibody immunologically specific for the isolated protein of claim 7, said antibody being selected from the group consisting of monoclonal, polyclonal, Fab, Fab' and Fv antibodies.

9. (Cancelled) An antibody as claimed in claim 8, said antibody being monoclonal.

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10.   (Cancelled) An antibody as claimed in claim 8, said antibody being polyclonal.

11.   (Currently amended) A nucleic acid as claimed in claim 1, further comprising the 5' untranslated, promoter region of a ruminant pregnancy specific marker.

12.   (Original) A nucleic acid construct as claimed in claim 11, said 5' untranslated promoter region being operably linked to a sequence encoding a reporter gene.

13. (Original) A method for detecting pregnancy-specific marker molecules in a ruminant test animal comprising:
a) obtaining a plurality of biological samples from said test animal and from a non-pregnant animal;
b) contacting said biological sample with a composition comprising one or more pregnancy specific marker molecule detection reagents in an amount effective to permit detection and quantitation of a pregnancy specific molecule, if present, in said sample;
c) determining from b) the amount of said pregnancy specific marker molecule, wherein an elevation of levels of said pregnancy specific marker molecule, relative to those obtained fromnon-pregnant animals, is indicative of pregnancy in said test animal.

14. (Original) The method of claim 13, wherein a lack of elevation of levels of said pregnancy specific marker molecule indicates that the ruminant is not pregnant.

15. (Original) The method of claim 13, wherein said ruminant is a bovine.

16.   (Cancelled) A method for detecting pregnancy in a

ruminant test animal comprising:

a) obtaining a plurality of biological samples from a test animal and from a non-pregnant animal;

b) contacting said samples with primers which specifically amplify one or more nucleic acid shown in Tables 2A-B;

c) performing polymerase chain reaction on said samples;

d) detecting amplified nucleic acids, an elevation of said nucleic acid level obtained from said test animal, relative to that obtained from said non-pregnant animal being indicative of pregnancy in said test animal.

17. (Cancelled) The method of claim 16, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, endometerium, chorionic villi and urine.

18. (Cancelled) A method for detecting pregnancy in a ruminant test animal comprising:

a) obtaining a plurality of biological samples from a test animal and from a non-pregnant animal;

b) contacting said samples with a detectably labeled antibody immunospecific for one or more proteins encoded by the nucleic acid sequences shown in Tables 2A-B;

d) detecting ruminant protein, an elevation of said protein level obtained from said test animal, relative to that obtained from said non-pregnant animal being indicative of pregnancy in said test animal.

19. (Cancelled) The method of claim 18, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, endometerium, chorionic villi and urine.

20. (New) The method of claim 13, wherein said biological sample is DNA and step b) comprises contacting said sample with primers which specifically amplify one or more nucleic

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acids shown in Tables 2A-B under conditions suitable for polymerase chain reaction (PCR), performing PCR on said samples and detecting amplified nucleic acids, an elevation of said nucleic acid level obtained from said test animal, relative to that obtained from said non-pregnant animal being indicative of pregnancy in said test animal.

21.   (New) The method of claim 20, wherein said DNA is obtained from a biological sample selected from the group consisting of blood, mononuclear cells present in blood, endometerium, chorionic villi and urine.

22.   (New) The method of claim 13, wherein said biological sample is protein and step b) comprises contacting said sample with a detectably labeled antibody immunospecific for one or more proteins encoded by the nucleic acid sequences shown in Tables 2A -B, detecting ruminant proteins or protein fragments, an elevation of said protein level obtained from said test animal, relative to that obtained from said non-pregnant animal being indicative of pregnancy in said test animal.

23.   (New) The method of claim 22, wherein said protein is obtained from a biological sample selected from the group consisting of blood, mononuclear cells present in blood, endometerium, chorionic villi and urine.

24.   (New) The method of claim 20, wherein said primers amplify a sequence selected from the group consisting of SEQ ID NO:5, 6, 19-23, 26, and 28-31.

25.   (New) The method of claim 22, wherein said antibodies are immunospecific for a protein sequence encoded by a nucleic acid sequence selected from the group consisting of 5, 6, 19-23, 26, and 28-31.

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